The Mint of the United States,
AT
PHILADELPHIA, PENN.,

October 26th, 1886.

Hon, Daniel M. Fox
Superintendent
Dear Sir,

I have at your request examined the estimate of Mr Henry. I. Snell. to furnish the necessary plant for the delivery to the Adjusting Room, of such quantity of pure air, heated to any desired temperature by the means of a Sturtevant Hot Blast Apparatus, as will correspond to the amount of air exhausted from the room by the present Exhaust Fan,

Mr Snell proposes to deliver into the Adjusting Room from 3000 to 3500 cubic feet of air per minute, drawn through a shaft opening above the roof, and forced by a fan over the coils of a steam heater located in the space now occupied by the cooking range, delivering the same into the room through suitable conductors placed around the walls of the room, on the floor line.

The cubical contents of the room is 34272 feet, or an allowance of 254 cubic feet to each of the 135 persons employed in the room, which would be represented by a space equal to a cube of 6 feet and 4 inches, from which must be deducted the space occupied by the individual.

It is therefore proposed in order to afford ample ventilation, to remove from the room 3500 cubic feet of

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vitiated air per minute, and force by the Hot Blast apparatus into the room the same amount of pure air at such temperature as may be desired, This will give to each person 22 cubic feet of pure air per minute, or 1320 feet per hour.

I would respectfully ask your attention to the following, taken from the report of Mr Robert Briggs, C. E, of the date of September 26th 1881.

Mr Briggs remarks that there are details for the competent builder of such apparatus (viz ventilating apparatus) to consider in each separate room or place: Some of the rooms will require larger volumes of air than can be

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admitted as cold air without producing strong currents, and will demand a supply of heated air. forced, or induced mechanically, that is by means of either an impulse or exhaust fan, or by means of an exhaust shaft or chimney. An instance of this kind is found in the Adjusting Room. Some 80 to 100 persons occupy some 25 to 20 square feet of floor space, to each individual, and have only 320 to 260 cubic feet of room space (also to each individual) while there exists as the very least demand when the room is frequently aired, the absolute requirement for 2400 to 3000 cubic feet of air each minute, To effect this supply with certainty and with regulated temperature to meet the Comfort of the occupant, the Self acting movements of air currents arising from difference of temperature of the air in the room, from that out of doors, is often insufficient and unreliable, and mechanical means must be resorted to.

The present Exhaust-Fan was erected during the Summer of 1877 after a Careful consideration of various plans and appliances, and a thorough inspection of the plant used in the Madison Square Theatre in New York; Claimed to be at that time the best ventilated building in the Country.

It

It has proven to have been effective as to the purity of the air in the Adjusting Room when the temperature of the air out of doors would permit of the fan being used to its capacity, This has never been done during the winter season, as the heating coils in the room were not sufficient to heat the full supply of air that should have been drawn into the room, therefore the purity of the air had to be secondary to the temperature of the room to suit the comfort of the occupants,

I submit that the estimate of Mr Snell is reasonable in price, and would therefore

respectfully —

ask your favorable consideration, being satisfied that the necessity fully warrants the expendature of labor and means.

Very Respectfully
Thom James
Foreman, Mch Shops

The Mint of the United States,

AT

PHILADELPHIA, PENN.,

Saml James, 18 .

Machinist

~~Superintendent~~.

Subject:

Estimate of Henry J Snell as to Plant for the Adjusting room.

No. of Enclosures,

[Abstract:] Estimate of Henry I. Snell as to plans for the adjusting room.

The Mint of the United States,
At Philadelphia, Penn.
October 26, 1886

Hon. Daniel M. Fox
Superintendent

Dear Sir,

I have at your request examined the estimate of Mr. Henry I. Snell to furnish the necessary plant for the delivery to the Adjusting Room, of such quantity of pure air, heated to any desired temperature by the means of a Sturterant Hot Blast Apparatus, as will correspond to the amount of air exhausted from the room by the present Exhaust Fan.

Mr. Snell proposed to deliver into the Adjusting Room from 3000 to 3500 cubic feet of air per minute, drawn through a shaft opening above the roof, and forced by a fan over the coils of a steam heater located in the space now occupied by the cooking range, delivering the same into the room through suitable conductors placed around the walls of the room, on the floor line.

The cubical contents of the room is 34,272 feet, or on allowance of 254 cubic feet to each of the 135 persons employed in the room, which would be represented by a space equal to a cube of 6 feet and 4 inches, from which must be deducted the space occupied by the individual. It is therefore proposed in order to afford ample ventilation, to remove from the room 3500 cubic feet of ventilated air per minute, and force by the Hot Blast Apparatus into the room the same amount of pure air at such temperature as may be desired, this will give to each person 22 cubic feet of pure air per minute, or 1320 feet per hour.

I would respectfully ask your attention to the following, taken from the report of Mr. Robert Briggs, C.E., of the date of September 26, 1881.

Mr. Briggs remarks that these are details for the competent builder of such apparatus (viz ventilating apparatus) to consider in each separate room or place: some of the rooms will require larger volumes of air than can be admitted as cold air without producing strong currents, and will demand a supply of heated air, forced, or induced mechanically, that is by means of either an impulse or exhaust fan, or by means of an exhaust shaft or chimney. An instance of this kind is found in the Adjusting Room, some go to 100 persons occupy some 25 to 20 square feet of floor space, to each individual, and have only 320 to 260 cubic feet of room space (also to each individual) while then exists as the very least demand when the room is frequently aired, the absolute requirement for 2400 to 3000 cubic feet of air each minute. To effect this supply with certainly and with regulated temperature to meet the comfort of the occupant, the self acting movements of air currents arising from difference of temperature of the air in the room, from that out of doors, is often insufficient and unreliable, and mechanical means must be resorted to.

NARA RG104, Entry 1, Box 142

The present exhaust fan was erected during the summer of 1877 after a careful consideration of various plans and appliances, and a thorough inspection of the plant used in the Madison Square Theater in New York; claimed to be at that time the best ventilated building in the country. It has proven to have been effective as to the purity of the air in the Adjusting Room when the temperature of the air out of doors would permit of the fan being used to its capacity. This has never been done during the winter season, as the heating coils in the room were not sufficient to heat the full supply of air that should have been drawn into the room, therefore the purity of the air had to be secondary to the temperature of the room to suit the comfort of the occupants.

I submit that the estimate of Mr. Snell is reasonable in price, and would therefore respectfully ask you favorable consideration, being satisfied that the necessity fully warrants the expenditure of labor and means.

Very Respectfully,
Saml. James
Foreman, Mch. Shop